6MQ8

Medium-Mu Triode—Sharp-Cutoff Pentode

9-Pin Miniature Type

For Use as a General-Purpose-Amplifier Tube in Color- and Black-and-White TV Receivers

ELECTRICAL CHARACTERISTICS – Bogey Values[a]

Heater Voltage, ac or dc	E_h	6.3 ± 10%	V
Heater Current	I_h	535	mA

Direct Interelectrode Capacitances:[b] (*Without External Shield*)

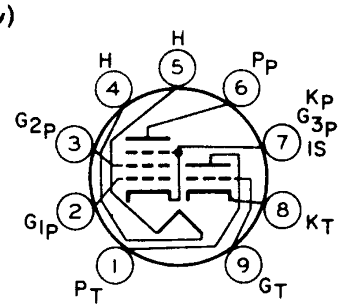
Triode Unit:			
Grid to plate	c_{g-p}	1.7	pF
Input: G_T to (K_T, $G3_P$ + K_P + IS, H)	c_i	3.0	pF
Output: P_T to (K_T, $G3_P$ + K_P + IS, H).	c_o	1.4	pF
Pentode Unit:			
Grid No.1 to plate . .	c_{g1-p}	0.045	pF
Input: $G1_P$ to (K_P + $G3_P$ + IS, $G2_P$, H) .	c_i	7.5	pF
Output: P_P to (K_P + $G3_P$ + IS, $G2_P$, H).	c_o	2.2	pF

For the following characteristics, see Conditions below:

		Triode Unit	Pentode Unit	
Amplification Factor . .	μ	40	-	
Plate Resistance (Approx.)	r_p	5	150	kΩ
Transconductance	g_m	8500	10000	μmho
DC Plate Current	I_b	18	12	mA
DC Grid-No.2 Current. .	I_{c2}	-	4.5	mA
Cutoff DC Grid-No.1 Voltage for I_b = 20 μA.	$E_{c1(co)}$	-12	-7	V
Conditions:				
Heater Voltage	E_h	6.3	6.3	V
DC Plate Voltage . . .	E_b	150	125	V
DC Grid-No.2 Voltage.	E_{c2}	-	125	V
Cathode Resistance. .	R_k	56	62	Ω

TERMINAL DIAGRAM (Bottom View)

Pin 1 - Triode Plate
Pin 2 - Pentode Grid No.1
Pin 3 - Pentode Grid No.2
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Pentode Plate
Pin 7 - Pentode Cathode, Grid No.3 and Internal Shield
Pin 8 - Triode Cathode
Pin 9 - Triode Grid



JEDEC 9AE

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MECHANICAL CHARACTERISTICS

Maximum Overall Length	2.187 in (55.54 mm)
Maximum Seated Length	1.937 in (49.19 mm)
Maximum Diameter	0.875 in (22.12 mm)
Envelope	JEDEC T6-1/2
Base	Small-Button Noval 9-Pin (JEDEC E9-1)
Dimensional Outline	JEDEC 6-2
Terminal Diagram	JEDEC 9AE
Type of Cathodes	Coated Unipotential
Operating Position	Any

MAXIMUM RATINGS - Design-Maximum Values[c]

		Triode Unit	*Pentode Unit*	
DC Plate Voltage	E_b	330	330	V
DC Grid-No.2 Supply Voltage	E_{c2}	-	330	V
DC Grid-No.2 Voltage	See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section.			
DC Grid-No.1 Voltage:				
Positive-bias value	E_{c1}	0	0	V
Heater-Cathode Voltage:				
Peak	e_{hkm}	±200	±200	V
DC	E_{hk}	100	100	V
Heater Current	I_h	500 to 570		mA
Grid-No.2 Input: For grid-No.2 voltages up to 165 volts	P_{g2}	-	0.55	W
For grid-No.2 voltages between 165 and 330 volts	See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section.			
Plate Dissipation	P_b	2.7	2.5	W

MAXIMUM CIRCUIT VALUES

Grid-No.1 Circuit Resistance:				
For fixed-bias operation	$R_{g1(ckt)}$	0.5	0.25	MΩ
For cathode-bias operation	$R_{g1(ckt)}$	0.5	0.5	MΩ

INTERELECTRODE LEAKAGE

Minimum Leakage Resistance between grid No.1 of each unit and all other electrodes of both units tied together	$R_{g1\text{-}all}$	100	MΩ

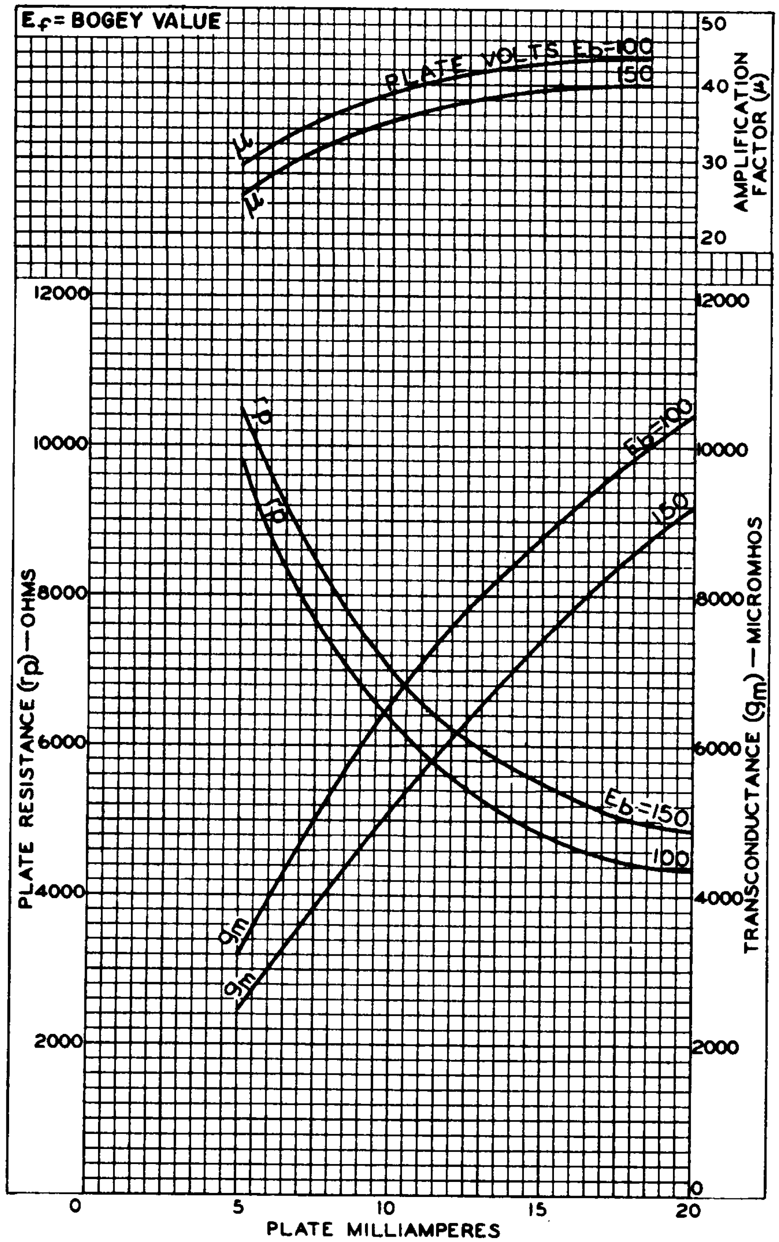
Conditions:
E_h = bogey value, E_{c1} = -100 V with respect to all other electrodes tied together.

[a] Unless otherwise specified.

[b] Measured in accordance with the current issue of EIA Standard RS-191.

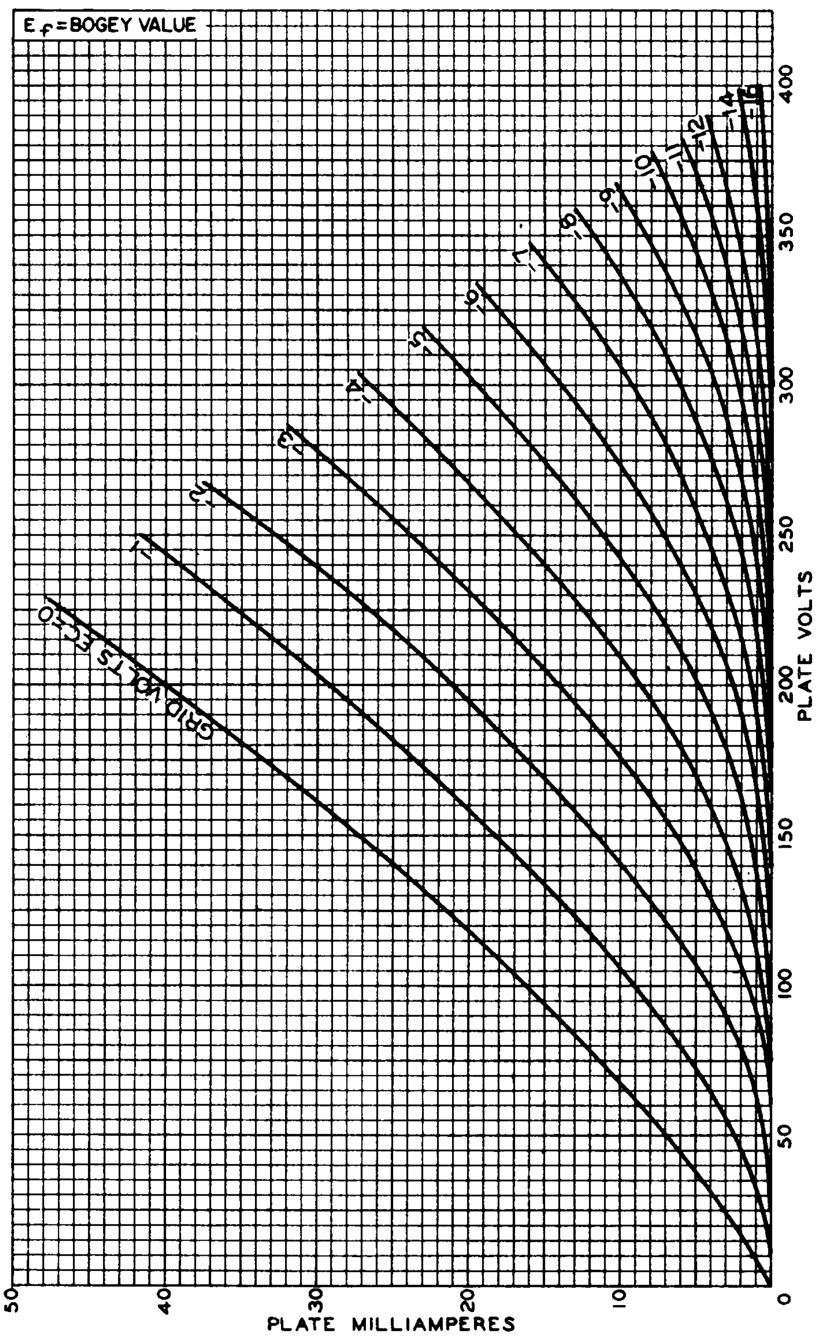
[c] As defined in the current issue of EIA Standard RS-239.

TYPICAL CHARACTERISTICS – Triode Unit



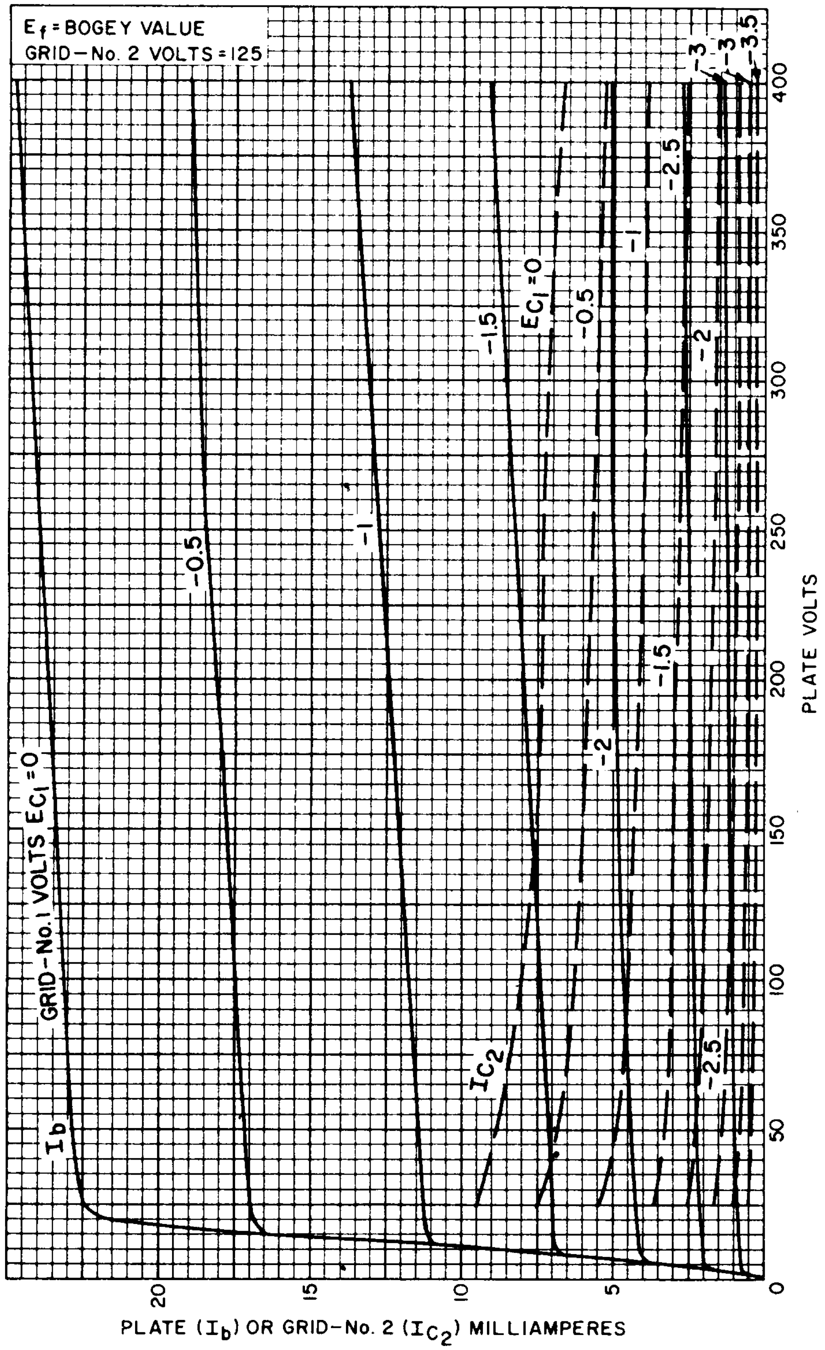
92CM-9882R1

TYPICAL CHARACTERISTICS – Triode Unit



92CM-9866R1

TYPICAL CHARACTERISTICS – Pentode Unit



92CM–15102

TYPICAL CHARACTERISTICS – Pentode Unit

